

W5YI

America's Oldest Ham Radio Newsletter REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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CONGRESS ATTEMPTS TO 'JUMPSTART' DTV CONVERSION

TV stations are facing the unsettling prospect of turning off their analog signals in a little over four years. The *National Association of Broadcasters* is not happy with House Energy and Commerce Committee chairman Billy Tauzin (R-La.) who has suggested draft legislation that could force TV stations to return their analog TV channel spectrum to the government at the end of 2006 regardless of how much of the public have the capacity to receive DTV (digital television) transmissions..

On September 25th, Tauzin (R-La) introduced an omnibus, bipartisan digital television (DTV) bill that addresses a menu of still unresolved issues concerning the transition to digital television.

Tauzin said the bill "...represents the Committee's starting legislative point to solve the DTV problem." The legislation focuses on the obstacles that have been identified as impediments to the transition and suggests solutions. He said he wanted "...debate, proposals and solutions ...because make no mistake – this transition will not fail. It will occur – that is a certainty."

Tauzin said he prefers "marketplace solutions" but the lack of progress "...has led to uncertainty in the marketplace and makes it very difficult for businesses to make solid plans for the future."

Among the suggestions in the draft *Omnibus Digital Television (DTV)* bill is a provision permitting the government to seize frequencies used for traditional analog signals regardless of how many viewers have switched to digital TV.

As the law stands now, a TV station's analog spectrum is to be returned by the end of 2006 providing 85 percent of any station's market is digital-TV-capable. This precondition is causing many TV stations to drag their feet on converting to digital transmission. It is now becoming increasingly clear that the transition to DTV will not occur in 2006 given its present pace.

The wireless industry (who want to use the old analog TV frequencies) and the government (who wants to sell the spectrum to them) is now favoring a hard date for the return of analog TV spectrum.

Regardless of the scope of the bill, however, no legislation is expected to pass until well into 2003. The obsolescence of nearly 300 million sets and other appliances, the cost of new digital equipment, and diminished rights for home recording are the core conflicts likely to keep broad DTV legislation jammed up in the Energy and Commerce Committee for much of next year.

The original ten year plan agreed to by the NAB was for broadcasters to get free DTV spectrum which would allow consumers to get sharper TV and six-channel surround sound ...and Congress to balance the budget.

But without the spectrum being made available, the U.S. faces a potential budget-busting loss of \$18 billion. That's the amount the government anticipated from the sale of analog TV spectrum when it passed the balanced budget amendment five years ago.

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SO HOW IS THE CONVERSION TO DTV GOING?

In a word: poorly. Ninety-eight percent of America's 105.4 million households still have a regular analog color TV. And even if they had a digital set, there is little to watch.

According to the FCC's latest figures, of the 1,504 TV stations granted digital-TV construction permits (CPs) or licenses, 552, or a little more than one-third, are up and running with digital. Of those, about one-half (277) are licensed and operating full-time. Another 275 are operating under special temporary authority, which means they are on periodically or "...with less than fully authorized facilities."

Of the 1,504 with licenses, more than half (843) have now asked for extensions beyond the May 1, 2002, deadline for building out digital facilities. The FCC has granted 772 and "admonished" 71 stations, which means an extension is not granted but with no penalty so far beyond the warning. Another 286 stations have now asked for second extensions. Stations can be given a maximum of two six-month extensions.

In the top 10 U.S. markets, where the 40 "Big Four" (ABC, CBS, FOX and NBC) affiliates are all supposed to be up and running, all but two are, those being WNBC-DT and WABC-DT, both New York, which had been on the air from the World Trade Center before Sept. 11.

DTV CONVERSION HAS A COST TO THE CONSUMER

Congressman John Dingell (D-Mi), ranking member on the Energy and Commerce Committee probably best highlighted the problem facing the consumer in the transition of television from analog to digital transmission. He issued an interesting statement:

"Over the course of broadcast history there have been many technological breakthroughs. In the 1950s, live telecasts gave way to recording on film and tape. In the 1960s, black and white gave way to color. In the 1970s and '80s, broadcasts began to migrate from over-the-air to cable.

"But as challenging as these technological advances were, none compares to the daunting task that is now before us. We now know that the wholesale transformation from analog to digital broadcasting not only requires an unprecedented degree of cooperation among and between industry players – each with their own unique and often divergent set of motivations and interests – but it also requires that some specific action be taken by each and every American household in order to succeed.

"We've all heard the digital conversion compared to the migration from black and white to color TV. If only it were that easy. But this transition is qualitatively different, and I would note one difference in particular that is tremendously important. Unlike the advent of color television, stereo broadcasts, cable TV or FM radio, this technological revolution will affect every consumer's pocket-

book, whether they want the new technology or not.

"In days gone by, if a consumer didn't want to pay to see programs in color, he or she simply held on to the old black and white set. Stereo broadcasts can still be heard in mono on TVs built with just one speaker. And if FM radio holds no appeal, a consumer can continue listening to stations on an AM receiver. But for the consumer who has no interest in receiving a crystal-clear digital television signal, or simply can't afford one, he or she very simply will be out of luck. There will be a cost, and the day to pay is right around the corner – perhaps as soon as four years from now.

"The average American household has nearly three television sets. Even using a most optimistic, albeit unlikely, assumption that every household will purchase a digital television set in the next four years, that will still leave two television sets in each and every house without a viewable signal.

"What happens then? If the TVs are connected to cable, the consumer will end up paying extra to buy or lease a digital converter box from their cable company or local electronics store. And if the TVs rely exclusively on over-the-air reception, as some 80 million sets do today, the consumer will be forced to pay even more to convert the digital signal to one that is viewable. Either way, consumers will end up paying hundreds of dollars apiece just to stay even. That is, to receive essentially the same TV service they enjoy today. Or else their sets will go dark.

"The draft legislation is an attempt to speed the transition so the analog broadcast spectrum can be returned to the government and put to higher and better uses for the public's benefit. That is an admirable goal, and I agree it should be pursued with some zeal. But it also should be balanced against the increased cost to the public of the digital conversion.

"To be sure, the ultimate success of the digital transition depends on inter-industry cooperation on important issues such as cable interoperability, digital TV tuners, and a "broadcast flag" (covered in our last issue) solution. The staff draft goes a long way toward assembling these puzzle pieces in a way the industries have been unable to do on their own thus far. For that I highly commend [Committee] Chairman Tauzin and [Subcommittee] Chairman Upton, and their staffs who worked so cooperatively with mine on these key points.

"But at the same time, I am not convinced that an expedited return of the spectrum should be the chief goal of this legislation. The Congress initiated the policy of converting the nation's broadcast system to digital, and I believe the Congress has the singular responsibility of ensuring that no consumer is disenfranchised as a result.

"I believe we should begin to focus on exactly what will happen to the American public when analog broadcasts cease to exist. How much will each family be expected to pay for the privilege of continuing to use their existing television sets? The answer to that question may be as startling to us as it is to the folks back home."

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DON MILLER, EX-W9WNV RELEASED FROM PRISON

Today's radioamateur has never heard of Dr. Don "DX" Miller, W9WNV, but long term licensed DXers recognize him as a legend in ham radio especially in the mid-1960's. In any event, he is probably the most famous and controversial ham radio DXer of all time. Don was first licensed exactly 50 years ago, in 1952.

In Korea, he was HL9KH where he was a captain and physician in the U.S. Army medical corp. He was in every contest and ran up big scores, operating CW with his left hand and simultaneously logging with his right. When Don got out of the service, he started showing up from countries that should qualify as a DXCC country.

Miller, now 66, has just been paroled from a California prison where he has been incarcerated for the past 23 years. In 1980 he was sentenced to '25 years to life' for conspiring to murder his estranged wife, Susan in 1978. She was not harmed because Miller was reportedly caught arranging a hit man in an undercover operation staged by the police. He was 43 at the time.

His call sign was taken in 1999 by Jim Danehy, W9VNE, under the Vanity call sign program and assigned to the Don Miller Fan Club. It might even be possible for him to get it back again if the call is relinquished. And that may be exactly what he has in mind. We heard that he is already studying the question pool for his Extra Class ticket. It is doubtful that the FCC can deny him a ham license since, although a convicted felon, he was not found guilty of a communications related offense.

Miller had been granted parole twice before. Both times the Governor of California blocked his release because his former wife, now remarried and living in another state, opposed his being set free.

During his 'heyday', W9WNV operated – or at least claimed he operated – from such exotic and remote places as Spratly Island, Ebon Atoll, Tokelaus, Maria Theresa Island, Cormoran Reef, Niue, Wallis Island, Mi-nerva Reef, North Cook, Suvarrow Atoll, Heard, Laos, Navassa, Serrana Bank, Bajo Nuevo, Desroches Island, Farquhar, Comoro Island, Geyser Reef (that one made the July 1967 cover of CQ magazine), Laccadive Islands, Blenheim Reef, Burma ...and many, many others. His equipment consisted of two Collins S-lines complete with 30S-1 linears, a Hy-Gain TH-3 tri-bander and a Sears Roebuck generator. Don worked twenty or thirty thousand contacts at every stop.

His DXpeditions were financed by the amateur community and tens of thousands of dollars poured in from 'Deserving DXers' all over the world who needed certain countries to fill out their DXCC Countries-Worked list. This was deadly serious business to them and Miller was their salvation. He would go to a rare location and put it on the DX map. There were widespread accusations that Don would not contact DXers who had not contributed to his efforts and his demeanor was often described as obnoxious, outspoken, confrontational and of extreme intensity.

The ARRL's DXCC Awards Committee started questioning several of the DXpeditions he said he operated from – such as Maria Theresa Island, Blenheim Reef, Chagos Island, Laccadive Islands, Navassa and Heard Island – and some or all of those operations were eventually discredited. Miller claimed that the League was harassing him and distributing "anti-DXpedition propaganda." When the ARRL disallowed his operations for DXCC credit, Miller slapped the League with a much publicized (and expensive for the ARRL to defend) civil suit.

The lawsuit collapsed, however, when Herbert Kline, K1IMP, another operator on the St. P&P effort said they had not operated at all from St. Peter and Paul Rocks. Miller entered into an agreement with the ARRL on June 15, 1968 to drop his suit and forfeited any right to file that or any similar suit in any U.S. court. (See August 1968 QST 'League Lines'.)

While he had an interesting and sometimes sordid past, there can be no question that Don Miller was a top notch operator who did bring a lot of rare DX from Southeast Asia, the South Pacific and the Caribbean between 1964 and 1968 to ham radio ...and several new countries.

Now a collector's item, in 1968, Cowan Publishing Corp (CQ) published the Amateur Radio DX Handbook by Don Miller. (And your author still has his copy.) I used his Great Circle Bearings based on Dallas-Ft. Worth in getting my own DXCC (both CW only and Mixed Mode.)

His code proficiency was extraordinary. Noted DXer Paul Dunphy, VE1DX said "Don could listen to a ferocious CW pileup for 30-45 seconds and then 5NN four or five stations in rapid succession. And Don could do this for hours and hours at a time, while camped out on some obscure rock or volcanic outcropping with the water splashing at his ankles." Some said that Don was charging for his contacts, and if you did not pay, Don would have difficulty in hearing your signal. Others wondered if he really heard the stations he was answering.

Former ARRL HQ staffer, CQ magazine DX columnist and editor of "The DX Magazine" Chod Harris, VP2ML (now an SK) once wrote:

"During the 1960's, Don Miller operated from many of the rarest DX locations around the world. While everyone in the DX community admired his enthusiasm and operating skills, some of his practices generated controversy. At times he seemed to hear the signals of those DXers making financial contributions to his DXpeditions over those of some Honor Roll DXers."

"He ran afoul of the ARRL Awards Committee following an unauthorized landing on Navassa Island. After a long disagreement with ARRL officials, including a law suit against the League, Don admitted he had never landed on St. Peter and Paul Rocks, and DXCC credit for that and some other Miller operations was denied."

"In spite of certain controversial issues involved, Don Miller W9WNV devoted more to the art of serious DXpeditioning than anyone else in those early years. DXers have always inspired controversy and so did Dr. Miller."

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CUTTING EDGE TECHNOLOGY

The FCC has approved Digital Audio Radio (DAR) broadcasting.

On October 10th, the Commission voted unanimously to adopt a digital broadcast radio scheme backed by large radio broadcasters. The so-called in-band on-channel (IBOC) technology is expected to bring clear, static-free CD-like sound to both AM and FM broadcast radio.

The IBOC system is unique in that it coexists on the same channel as the existing analog FM or AM station. In a sense, digital audio radio is similar to hooking up the digital output from a CD player directly to a radio transmitter.

While broadcasters can implement the new technology immediately, it could take several months for them to get new transmitters. The big winner will be AM radio which has lost out in recent years to the better sound quality of FM radio. The new standard provides digital AM radio on a par with FM digital radio.

The FCC approved technology developed by iBiquity Digital Corp. (Columbia, Md.) as the nation's standard for broadcasting AM and FM radio programming. The new format allows radio stations to beam CD-quality sound over on their existing AM and FM frequencies. It has already been successfully tested by several radio stations.

Several radio receiver manufacturers have already licensed the iBiquity technology and plan to introduce new digital radios at the International Consumer Electronics Show in January. The new digital car radios and high-end sound systems will add about \$100 to the cost of a receiver.

Using new audio compression technology, both audio and wireless data content can be transmitted by radio stations at the same time yielding new features such as personalized programming.

For example, you'll be able to see the artist and title of the song on your "radio screen" as it's being played. Or listeners could choose when to hear reports on stocks, sports, weather and traffic.

Unlike the conversion to digital television, there is no downside to consumers. Since both analog and digital signals are simultaneously broadcasted, listeners can use their existing AM/FM radio if they do not wish to buy a new digital radio. More info on DAR is available online at: <<http://ibiquity.com>>.

EMERGING COMMUNICATIONS

The National Cable & Telecommunications Association said that high-speed cable-modem Internet service is now in about 10 million homes. About half as many households have Digital Subscriber Line (DSL) phone-based broadband service ...about 5 million homes.

Over the past six years, the number of cable modem customers in the United States has dramatically grown. From a base of 10,000 at the end of 1996, the number increased to 74,000 by the end of 1997; a half million by the end of 1998; 1.6 million by the end of 1999; 3.7 million at the end of 2000, and 7.2 million at the end of last year.

NCTA said the broadband service is available to more than 75 million cable-ready homes, with about two-thirds of those containing computers ...a potential of 50 million cable-modem hookups.

The cable industry is averaging about 1 million new high-speed subscribers each quarter, versus some 500,000 for DSL.

COMPUTERS & SOFTWARE

Bugbear is the latest mass-mailing virus to target Windows users.

The computer virus, identified on Sept. 29, is spreading fast through e-mailed attachments and unpatched versions of the Internet Explorer 5.5 browser.

Network Associates' Anti-Virus Emergency Response Team has upgraded its threat rating from 'low' to 'medium.' Bugbear (also known as "Tanatos") has the capability to disable security software and can steal passwords and credit card information. There have been tens of thousands of infections UK, U.S. and India.

When Bugbear hits a PC, it scans a machine for e-mail addresses and then fires off messages purporting to be from the names it has found on hard drives. The worm copies itself into the Windows system directory and start-up folder as a .exe file with a random three letter name.

Once installed it disables anti-virus and firewall software and installs a Trojan keystroke logger as a DLL, detected as PWS-Hooker.dll. Whatever the PC user types via the keyboard, such as passwords

or sensitive information, is sent to the originator of the virus via the TCP port 36794.

To prevent infection, Windows users should download the Microsoft patch, update their anti-virus software and refrain from opening an attachment unless the sender confirms he or she sent it.

GADGETS & GIZMOS

NASA astronaut Sally Ride, the first woman to blast off into space, is challenging middle-schoolers to think like engineers by designing a toy for a competition called ToyChallenge.

In the process, she hopes to encourage more girls to pursue careers in the field of science. According to the Bureau of Labor Statistics, women comprise only 9 percent of the engineering workforce.

ToyChallenge is open to kids in grades five through eight. Students work in teams of up to six people with an adult coach. At least half of the team members must be girls. Registration costs \$25 per team. The deadline is November 15.

In Phase One, teams choose a toy category, brainstorm an idea and develop it at a cost of less than \$200, including donated materials. They must describe and submit sketches of their creation by January 31, 2003.

Ten teams will be awarded \$250 each in early March based on their idea's originality. In Phase Two, all teams develop a prototype of their toy. Three grand prizes will be awarded: a week at Space Camp in Florida for each team member and a VIP tour of Kennedy Space Center. See: <www.sallyrideclub.com/-ToyChallenge>.

Christmas present for gadget freaks. AIBO is Sony Corp's (\$1,299) robotic dog that uses artificial intelligence to coexist with humans. It is equipped with a brain (CPU) and sensory organs (sensors) and operates by itself through the use of specially designed Memory Stick application software which gives it emotions and instincts as well as the ability to learn, communicate and mature.

Its latest upgrade (available in late November at \$99) allows the dog to recharge itself when its battery runs low and owner recognition technology enables the robot to recognize its owner's name, voice

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and face.

When AIBO senses "hunger" (i.e., the need for energy) it will search for and locate its Energy Station, walk over to it and navigate its body onto the station's cradle to recharge itself. Once charged, AIBO will then walk away from its charger without human assistance.

Upon hearing its owner's name and/or voice and/or seeing its face the robot expresses affectionate emotions. More info at: <www.us.aibo.com>.

INTERNET & WORLD WIDE WEB

Google, the innovative search engine people, has launched a robot news site that has no human editors. Instead, the website constantly monitors the news stories being reported at 4,000 different sites and automatically puts together its own version based on what others are covering. Even the layout is constructed automatically in real-time and changes every few minutes based on what is happening in the world, the U.S., business, technology, sports and entertainment.

Google says it does not want to become a full service portal website, but it appears to us that is where it is headed. You can get to the news site by going to <www.google.com> and clicking on the "news" tab on the far right.

Both E-Bay and Buy.com are working on bringing their Internet selling to television. Sony Pictures Television will produce the E-Bay TV show.

The U.S. House of Representatives has passed legislation that prohibits illegal Internet casinos from completing payments from Americans.

The bill requires banks and other financial institutions to disallow use of their products, like credit cards or wire transfers, for Internet gambling. The legislation also requires Internet Service Providers to block gambling Web sites.

Virtually Internet casinos are located overseas, outside of United States jurisdiction. The goal is to cut off their money supply. Many credit card companies already block online gambling transactions on their own.

About 60 percent of the \$3.5 billion in revenue generated this year at Internet casinos came from bettors living in America.

But the 107th Congressional Session is

nearing its end, and with the Senate not yet acting, the bill may die and will have to be taken up by a new Congress.

Vegas-based casino giant MGM Mirage very quietly launched its highly anticipated online casino on September 26th from the Isle of Man, a new offshore gambling venue.

The tiny island in the Irish Sea off the coast of Great Britain is a self-governing territory and not part of the United Kingdom. Its Parliament recently passed the Online Gambling Regulation Act 2001 enabling the independent nation to license companies to conduct interactive casino gaming.

<www.PlayMGMMirage.com> launched with no formal announcement whatsoever. There is no software to download, instead utilizing Macromedia "flash" technology. The site offers 19 games, including roulette, poker and blackjack.

MGM-Mirage is the first Las Vegas-based casino company to operate an offshore online casino. It is easily accessed from the U.S. The site appears to be based in Las Vegas – complete with links to MGM's many Las Vegas properties – but the fine print says otherwise.

Nevada recently passed a law authorizing online casinos if certain conditions were met. In August 2002, however, the U.S. Department of Justice ruled that online casino gambling is a violation of the Federal Wire act.

MGM Mirage says it will only accept bets from players in jurisdictions where online gambling is legal. The firm, however, says it wants to be ready "if and when Internet gambling comes" to the United States.

As many as five different computer technology applications are employed on the site, to ensure that players are who they say they are and do not live where online gaming may be illegal, including the United States.

The company claims it can block U.S. customers by asking and verifying Passport and Driver's Licence numbers and other government issued identification. Two forms of ID are required.

PlayMGMMirage is compatible with Internet Explorer Browsers 5.0 and higher as well as America OnLine.

The key holiday selling season is upon us. Jupiter Research expects the total online retail sales will grow by 17% this year, to \$13.1 billion. While more "dollars", that would be a

drop from the 30% gain recorded in 2001 compared to 2000. Besides a sluggish economy, there are six fewer holiday shopping days this year than last.

At presstime, America OnLine was set to rollout a new 8.0 version of its software which aims to "personalize" its sagging Internet service. AOL executives also claim that version 8.0 will become the foundation on which to build exclusive programming for its 35 million members.

The Dulles, Virginia-based Web giant has fallen victim to a weak ad market, slowing subscriber growth, a huge drop in their stock price, multiple government investigations into its accounting practices and substantially being a dial-up service in a rapidly emerging broadband world.

New rumored 8.0 features: AOL users will be able to self-identify themselves among six "profiles" to be directed to pertinent content and be able to immediately find and engage other members in a chat on a specific interest.

A new "AOL Companion" provides notice of incoming e-mails and instant messages from a small desktop toolbar while AOL is minimized. Another new feature is six different "themed" welcome screens.

AOL also plans to offer premium products, including a \$3.95 monthly Internet call-waiting service, which will take incoming phone messages when members are online.

We also heard that Version 8.0 no longer will support one-way (download-only) satellite-delivered broadband with which AOL had a Hughes/DirecTV arrangement. The upload went by dial-up. Instead AOL will push DSL and enter into more cable deals.

AOL also plans to open an "Internet Bazaar" in January which will let anyone offer stuff for sale. Sellers will offer goods at fixed prices on which AOL will collect a commission.

Microsoft Corp. with less than 9 million subscribers is also unleashing an 8.0 version of its MSN Internet service. MSN-8, with a new promotional theme ("Better with the butterfly" ...the service's logo) features new parental controls ...and souped-up virus and spam protection.

The Internet has finally arrived in Iraq. Internet cafes have sprung up all over Iraq and citizens may even have Internet connections at home. But all e-mail and surfing must be funneled through Uruklink, the govern-

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FCC APPROVES PERSONAL USE OF EMERGENCY BEACONS

Going outdoors for many means getting away from civilization - whether for recreation, adventure or work in remote areas. A major problem is how to alert search and rescue (SAR) help in an emergency - such as broken bones, a landslide or avalanche ...or an approaching fire when you are beyond traditional communications.

Emergency alerting radio beacons has saved thousands of lives worldwide. It relies on look-down coverage from a network of satellites far above us. Very precise transmissions on 406 MHz allow these satellites to compute the position of emergency ground-based transmitters and to harness rescue centers around the world to deploy search and rescue forces.

Sea-going vessels, aircraft flying internationally, the U.S. Coast Guard and the military have used position-reporting radio beacons for years. But up to now, the technology has not been available to individuals. The problem has been two-fold; false alarms and the inability to respond to terrestrial locations.

According to Coast Guard figures, there are already about a dozen false alarms for every bona fide emergency beacon signal received. However, a new PLB verification process now helps to determine whether a signal represents a legitimate emergency before the rescue effort is deployed. Any alert from a land location is now immediately transferred to the U.S. Air Force. Marine emergencies are still handled by the Coast Guard.

Part 95, Subpart "H" Personal Locator Beacons

On September 27th, the FCC added a new Personal Radio Service to Part 95 which authorizes the use of 406.025 MHz for satellite-aided Personal Locator Beacons. (*Report & Order, WTB Docket 99-366*). It uses two frequencies. A UHF signal sent to a satellite instantly alerts SAR personnel of an emergency, tells them where you are anywhere on earth and a VHF 121.5 MHz homing beacon brings rescuers the last few yards to your position.

406 Hz Personal Locator Beacons must use G1D emission and contain a homing beacon which transmits the Morse code letter "P" on 121.500 MHz. Only distress and safety communications are permitted. The unit must be certified as meeting COSPAS/SARSAT standards and its unique identification code must be registered with NOAA. More information may be found online at: <www-sarsat.noaa.gov> and <poes.gsfc.nasa.gov/sar/sar.htm>

Background of the proceeding

On June 3, 1993, the National Oceanic and Atmospheric Administration (NOAA), an agency of the U.S. Dept. of Commerce, filed a *Petition for Rulemaking* asking that the FCC provide for personal locator beacons to provide individuals in remote areas a means to alert others of an emergency situation and help SAR personnel locate those in distress.

While NOAA's petition was pending, the FCC granted the State of Alaska a developmental license to use Canadian-approved PLBs in Alaska. As a result of that success, on January 18, 2000, the FCC proposed the use of personal locator beacons by U.S. individuals.

In the United States such distress-alerting radio beacons are called emergency locator transmitters (ELTs) when carried on aircraft and emergency position indicating radio beacons (EPIRBs) when on ships.

ELTs and EPIRBs transmit distress signals on 121.500 MHz, 243.000 MHz and 406.025 MHz to the COSPAS/SARSAT satellite system which detects and locates transmissions from emergency beacons carried by ships, aircraft, governments and individuals. It has been in operation for over twenty years.

The U.S. military and NATO forces use beacons that transmit at 243.0 MHz. Beacons that transmit at 406 MHz send digitally encoded information which includes a beacon ID for accessing a user registration database. This database can supply the beacon type, its country of origin, and the registration number of the maritime vessel, aircraft or any other unit and can also include location data derived from the Global Positioning System

EPIRBs and ELTs designed to transmit distress signals on 406.025 MHz emit short, digital signals to provide distress alerting in emergencies, and use 121.500 MHz to provide homing.

Distress 406 MHz signals can be stored on-board COSPAS/SARSAT satellites and later retransmitted to a ground station thus eliminating the "blind spots" that exist with the older 121.500 MHz and 243.000 MHz EPIRBs and ELTs.

Hand-held, wearable and float-free Personal Locator Beacons - many with GPS-derived latitude and longitude data - are already available since they are authorized in many other countries, most notably in Europe, Australia, Russia and Canada. Cost ranges from \$500 to \$1000 depending upon features.

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FCC REDESIGNS ITS ULS LICENSE SEARCH FUNCTION to include innovative new features and expanded search capabilities.

The new layout (available via the "Search Licenses" link on the Universal Licensing System homepage at: <http://wireless.fcc.gov/uls>) provides FCC customers more search options, better control of search criteria, and faster, easier navigation of displayed licensing information. The FCC said "All of the new features of ULS License Search were designed with the needs of ULS customers in mind-we listened to your comments in focus groups, letters, calls, and emails."

Users who bookmark ULS License Search should update their bookmark or favorites list with the new URL.

New Features for ULS License Search

- Speed and Compatibility** – The new search not only features a bold new Web design, but improved system software. New Java Server Pages technology and HTML forms dramatically increase the speed of searches and cut the time required to load search results pages.
- Direct Access to Information** – Many of the new features, such as navigation tabs and menus for the license detail pages, were designed to provide direct access to the information in our database.
- New Basic and Advanced License Search** – The search fields most often used can be easily selected on the Basic Search page, eliminating the need to read through the entire list of ULS search fields. Select Advanced search for a more detailed set of search criteria.
- Service Specific Searches** – are available for Amateur, Aircraft, Commercial and Restricted, GMRS, Ship, and Market-Based licenses.
- No Limit on Search Results** – Previously this limit was set at 3,000.
- License Search Detail Screens** – New navigation tabs across the top of the screen provide instant access to information. The detail pages also provide a number of custom features for finding and organizing information.
- Record Accessibility** – Click on the file number of an application or automated letter to access those records directly in a new browser window.
- Improved Geographical Search** – Find licenses by state and county; by street address, city, state, or zip code combinations; or by latitude and longitude. Combine an advanced search with a geographical search to display results geographically.
- Printable Page** – New Printable Page button appears at the top of all search results, pre-formatted for most common printers.
- Reference Copy** – A new Reference Copy button appears printing of an unofficial copy of the license.
- Redesigned Query Download** – New Query Download button at the top of any search results screen will send the results of your search by e-mail to you in a pipe-delimited text (*.txt) file. Import this file into your favorite spreadsheet application. (FCC Public Notice)

AMATEUR RADIO CENSUS - AS OF SEPTEMBER 30

Ham Radio continues down the same path it has been taking since Amateur Radio was restructured on April 15, 2000 from six to three new classes.

The good news (for equipment manufacturers) is that the number of licensees authorized to work HF (and buy high-dollar transceivers) has increased dramatically over the past couple of years.

Novice and Advanced Class: continues to decrease since the issuing of new Novice and Advanced Class licenses was abolished on April 15, 2000. Existing Novice and Advanced Class licenses may be renewed and modified indefinitely, however.

Technician & Tech Plus: have been combined in the chart below since (after April 15, 2000) no new Tech Plus licenses are issued and Tech Plus licensees renewing their license receive a Technician Class license instead (but retain code credit.) Total number of Tech/Tech Plus operators has remained at pretty much the same level for the past several years and now accounts for nearly half of all U.S. licensed ham operators.

General and Extra Class: has increased substantially (more than 25 thousand each) since the 13 and 20 words-per-minute code exam was dropped.

Amateur Census by State/License Class: A break down of the current census by state is on the next page. The total number of U.S. ham operators has not changed much over the past six years. Here's the figures:

AMATEUR CENSUS - SEPTEMBER 30 - LAST SIX YEARS

Class/Year	1997	1998	1999	2000	2001	2002
Novice	65142	58705	53510	47180	41184	36697
% of Total	9.6%	8.7%	7.9%	6.9%	6.0%	5.4%
Tech/Tech+	316413	323843	333194	319502	319430	319771
% of Total	46.7%	48.1%	49.3%	46.9%	46.8%	47.0%
General	115460	111989	110518	132144	138047	138795
% of Total	17.1%	16.6%	16.4%	19.4%	20.2%	20.4%
Advanced	106207	103775	103512	89605	87045	84553
% of Total	15.7%	15.4%	15.3%	13.2%	12.7%	12.4%
Extra	73915	74366	75207	92541	97227	100882
% of Total	10.9%	11.1%	11.1%	13.6%	14.2%	14.8%
Total:	677137	672678	675941	680972	682933	680698
	100%	100%	100%	100%	100%	100%

New Licenses: For the trailing year, there were an average of 1,661 new (first time) Amateur Radio licenses issued monthly, an improvement over the previous trailing year's monthly average of 1,501 new licenses.

Vanity Call Signs: So far this year, an average of 504 Vanity call signs are issued monthly.

Club Stations: There are 7,744 Amateur Radio clubs currently licensed. (5,994 have Extra Class trustees.)

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Census of U.S. Amateur Radio Operators by License Class as of September 30, 2002

State Name	Extra	Advanced	General	Techplus	Technician	Novice	Total
AK Alaska	465	372	650	303	1305	116	3211
AL Alabama	1644	1253	2071	1068	4139	361	10536
AR Arkansas	1058	803	1263	665	3019	260	7068
AZ Arizona	2365	2051	3092	1621	6066	546	15741
CA California	11591	11112	17011	11313	43409	5666	100102
CO Colorado	1958	1600	2428	1363	4549	480	12378
CT Connecticut	1393	1085	1866	930	2264	653	8191
DC Dist. Columbia	71	72	108	37	99	30	417
DE Delaware	246	171	331	168	407	70	1393
FL Florida	5956	6128	9882	4345	10846	2480	39637
GA Georgia	2296	1978	3020	1644	5155	578	14671
HI Hawaii	503	372	583	398	1313	175	3344
IA Iowa	1045	1040	1508	626	1865	361	6445
ID Idaho	604	434	855	470	1984	136	4483
IL Illinois	3526	2899	4998	2487	7308	1408	22626
IN Indiana	2146	1775	3197	1771	5374	826	15089
KS Kansas	1007	822	1624	781	2566	423	7223
KY Kentucky	1291	934	1674	953	3507	456	8815
LA Louisiana	1052	987	1399	702	2159	325	6624
MA Massachusetts	2520	1919	3248	1717	3948	928	14280
MD Maryland	2003	1580	2383	1212	3258	628	11064
ME Maine	704	529	1061	445	1467	224	4430
MI Michigan	3274	2578	4592	2281	7502	1056	21283
MN Minnesota	1755	1436	2407	1103	3618	519	10838
MO Missouri	1991	1628	2729	1284	4449	636	12717
MS Mississippi	738	631	943	430	1663	166	4571
MT Montana	468	350	644	290	1166	153	3071
NC North Carolina	2868	2322	3705	2014	6717	1029	18655
ND North Dakota	222	162	358	195	571	67	1575
NE Nebraska	569	546	1005	416	1178	198	3912
NH New Hampshire	917	572	1057	549	1636	251	4982
NJ New Jersey	2626	2229	3397	1952	4063	1111	15378
NM New Mexico	861	684	1013	472	2362	138	5530
NV Nevada	736	590	1078	486	1816	172	4878
NY New York	4707	4005	6774	3723	9939	2518	31666
OH Ohio	4471	3475	6227	3801	10460	1743	30177
OK Oklahoma	1349	1069	1610	954	3870	345	9197
OR Oregon	1862	1624	3020	1412	4823	649	13390
PA Pennsylvania	4118	3278	5467	2862	7140	1457	24322
PR Puerto Rico	377	476	853	1377	1531	1457	6071
RI Rhode Island	398	262	558	335	587	164	2304
SC South Carolina	1129	864	1595	706	2371	289	6954
SD South Dakota	271	232	384	137	482	94	1600
TN Tennessee	2202	1778	2784	1598	5127	568	14057
TX Texas	6861	5662	8345	4391	15416	1606	42281
UT Utah	832	599	1054	975	5306	241	9007
VA Virginia	2977	2274	3458	1829	5608	842	16988
VI Virgin Islands	49	25	80	27	91	17	289
VT Vermont	376	236	448	224	845	89	2218
WA Washington	3389	2830	4976	2780	9555	1094	24624
WI Wisconsin	1682	1362	2347	1025	3799	498	10713
WV West Virginia	849	567	1087	623	3066	275	6467
WY Wyoming	257	184	334	162	633	70	1640
Other	257	107	214	154	788	55	1575
Total:	100882	84553	138795	75586	244185	36697	680698

Other = Guam, N. Mariana Island, American Samoa and Armed Forces AA, AE, AP addresses.

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ITU REGION 1 CONFERENCE TO BE HELD NOV. 10-15

The International Amateur Radio Union's ITU Region Conference is slated to take next month in San Marino. This landlocked tiny republic – about one-third the size of Washington, DC – is located in northern Italy. It claims to be the world's oldest republic ...going back more than 1,700 years. Its main industry is tourism.

The conference will be hosted by ARRSM (Associazione Radioamatori Della Repubblica di San Marino (San Marino Amateur Radio Association) at the San Giuseppe Hotel.

IARU Regional conferences are held every three years, one region a year. The last IARU ITU Region 1 Conference was held in Lillehammer, Norway in 1999. Funding for the various member societies to travel to San Marino is apparently a problem and IARU Region 1 funds are available to Conference participants if they can't pay their own way.

While many topics are on the agenda, the subject of Morse code proficiency in the HF Committee is indeed shaping up to be very controversial. Germany's DARC (Deutscher Amateur Radio Club) and the Russian Federation (Union of Russian Radio Amateurs) are already on record as opposing dropping the code from the international requirements. The United Kingdom's RSGB (Radio Society of Great Britain) is leading the charge to eliminate manual telegraphy as a prerequisite to HF operation on the ham bands.

Both the DARC and the RSGB have submitted Conference documents. The DARC is the largest ham group in Europe with about 65 000 members and 1,050 clubs. (To be brief, the two documents are paraphrased.)

DARC Conference Document

Introduction: A key discussion topic of Region 1 Conferences has always been the question of proven knowledge of Morse Code for an HF license. One major requirement, however, is not disputed ...a necessity to keep the knowledge level of Amateur Radio examinations at least at the present standard.

Morse code is a hurdle which forces an interested candidate to study a bit longer than 10 hours to gain a ham radio license. The question is how important is an examination speed of 5 or 12 wpm.

In view of an International Amateur Radio License (like CEPT Class 1 and 2 and possibly 3) a common proficiency level is needed. The IARU Administrative Council's Guatemala Resolution 01-1 concerning Morse code needs to be reviewed. In any event, the examination conditions as expressed in T/R 61-02 should be kept as they now exist. Solo actions of societies should be avoided.

Proposal:

- a.) Region 1 societies are urged to ask their authorities to keep the Morse code test requirement;
- b.) are urged to ask their authorities to keep the examination levels of the T/R 61-02; and

- c.) should discuss a Novice license system before introducing it to their national authorities.

The DARC document was signed by Hans Berg, DJ6TJ.

RSGB Conference Document

Background: At the IARU Region 1 Conference in Lillehammer in 1999, the Radio Society of Great Britain submitted a paper concerning the needed qualifications for an amateur license. The conference voted overwhelmingly in favor of the RSGB paper, which defined the qualifications by reference to broad categories of knowledge.

Immediately after the Lillehammer conference, the same RSGB paper was adopted as an IARU Administrative Council resolution (Resolution number 99-1) and has now resulted in an ITU Recommendation (ITU-RM1544). It is hoped that this will be incorporated by reference into S25 of the ITU Radio Regulations at the forthcoming WRC in 2003. Additionally both Region 2 and Region 3 have voted for the removal of Morse Code from the qualifications needed for an HF amateur license.

In October 2001, the Administrative Council of the IARU agreed to the following resolution:

"Considering the approval without opposition of ITU-R Recommendation M.1544, which sets out the minimum qualifications of radio amateurs, recognizing that the Morse code continues to be an effective and efficient mode of communication used by many thousands of radio amateurs, but further recognizing that the position of Morse as a qualifying criterion for an HF amateur license is no longer relevant to the healthy future of amateur radio, resolves that:

- a.) member societies are urged to seek, as an interim measure, Morse code testing speeds not exceeding five words per minute;
- b.) setting aside any previous relevant decisions, IARU policy is to support the removal of Morse code testing as an ITU requirement for an amateur license to operate on frequencies below 30 MHz."

Note that there is no reason why an individual administration can not require some Morse testing for an HF licence. However, under the terms of ITU-R M1544 and the AC resolution, the intent is that this would not be an international requirement.

Recommendation: Setting aside any previous relevant decisions, Region 1 of IARU should formally endorse the October 2001 resolution of the IARU Administrative Council in respect of Morse Code, in its entirety.

As a consequence, member societies are asked to work with their administrations to support the objectives set out in the AC resolution and in furtherance of the adoption of ITU-R M1544 as part of the internationally agreed requirements for an amateur radio license. The requirements consist of knowledge in Radio Regulations and Licensing Conditions, Interference, Operating Skills, EMC and Safety, Theory of Electronic Circuits and Devices, Transmitters, Receivers, Antennas, Propagation, Modes of Communication and Measurements.